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EXAMINER

HAN, JASON

ART UNIT PAPER NUMBER

2875

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,997

Applicant(s)

SLOAN ET AL.

Examiner

Jason M. Han

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 37-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-15 and 17-36 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3 Total Pages.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 37-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 13, 2006.
2. Applicant's election without traverse of Claims 12-36 in the reply filed on February 13, 2006 is acknowledged.

Information Disclosure Statement

3. The information disclosure statement filed February 20, 2004 had references not considered because the Applicant provided no English translation for pertinent disclosures of the foreign patent documents.
4. Most of the U.S. patent documents filed on March 30, 2005 were not considered by the Examiner due to redundancy in being cited on the earlier information disclosure statement filed November 7, 2003.

Specification

5. The disclosure is objected to because of the following informalities:
 - a. Page 1, Line 28: Grammatical error – “incondescent”;
 - b. Page 13, Line 21: Grammatical error – “on” should read as “one”;Appropriate correction is required.

Claim Objections

6. Claim 13 is objected to because of the following informalities: Typographical error in line 2 of the claim – “and array” should read as “an array”. Appropriate correction is required, whereby, at present, the best-deemed interpretation was applied in the rejection below.

7. Claim 16 is objected to because of the following informalities: Typographical error in line 3 of the claim – “the anchoring slots” lacks antecedent basis. Appropriate correction is required, whereby, at present, the best-deemed interpretation was applied in the rejection below.

8. Claim 27 is objected to because of the following informalities: In line 4 of the claim – “PCBx” should read as “PCBs”. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 12, 19-21, 26-27, and 33 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 3-4 of U.S. Patent No. 6776504. Although the conflicting claims are not identical, they are not patentably distinct from each other because all structural limitations are commonly recited with the exception that the patent application does not teach the perimeter light being bendable, which is considered obvious to one ordinarily skilled in the art.

10. Claims 12-14, 17-23, 26, and 28-34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-7 of U.S. Patent No. 6776504. Although the conflicting claims are not identical, they are not patentably distinct from each other because all structural limitations are commonly recited with the exception that the patent application does not teach the perimeter light being bendable, which is considered obvious to one ordinarily skilled in the art.

11. Claims 12-36 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-48 of copending Application No. 10/824890. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application commonly or similarly recites all the structural limitations of the present application, but with different wording and the exception of the end bumpers (Claim 22), which are considered an obvious modification to protect the lighting apparatus from the external environment as well as ensure security/stability to the inside components.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 12-36 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-5, 8-15, 18-38 of copending Application No. 10/824890. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application commonly or similarly recites all the structural limitations of the present application with the exception of the perimeter light and circuit board being bendable/flexible, which is considered obvious to one ordinarily skilled in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following claims have been construed in light of the specification, but rendered the broadest interpretation as stated by Applicant within the claim language [MPEP 2111].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 12-14, 17, 19, 21, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Atchinson et al. (U.S. Patent 6371637).

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14. With regards to Claim 12, Atchinson discloses a bent elongated perimeter light including:

- An array of light sources [Figures 1, 4: (32)] that are illuminated by electric power [Column 1, Lines 11-15];
- An elongated tube [Figure 4: (22)] bent to match a curve or shape, whereby the array of light sources are disposed within the tube, further whereby the tube transmits and disperses the light from the array giving the appearance that the array of light sources is a continuous light source [Column 9, Line 63 – Column 10, Line 5]; and
- Whereby said array of light sources are cuttable at intervals to shorten the array while allowing the remaining light sources in the array to emit light, and the tube being cuttable to match the length of the array [Column 4, Lines 4-8].

15. With regards to Claim 13, Atchinson discloses the array of light sources being an array of light emitting diodes [Column 5, Line 3].

16. With regards to Claim 14, Atchinson discloses the array of LEDs including a plurality of parallel connected sub-arrays of LEDs [Figure 9].

17. With regards to Claim 17, Atchinson discloses the array of LEDs capable of being cut between two of the plurality of parallel connected sub-arrays to shorten the LED array [Column 9, Lines 9-20].

18. With regards to Claim 19, Atchinson discloses a means for anchoring [Figure 4: (49)] the bent perimeter light to a structure.

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19. With regards to Claim 21, Atchinson discloses first and second conductors [Figure 9: (97, 98)] to transmit the electrical power from the input of the LED array to the output for connecting the perimeter light to another device, wherein the cutting of the LED array does not interrupt the conduction of the electrical power along the first and second conductors [Figure 8-9; Column 9, Lines 9-20].

20. With regards to Claim 23, Atchinson discloses the linear array of light sources including a linearly aligned array of light emitting diodes (LEDs) mounted on the substrate [Figures 1, 2, 4].

21. With regards to Claim 24, Atchinson discloses the array of LEDs being mounted to a flexible circuit board material [Figure 4: (37); Column 5, Line 7].

22. With regards to Claim 25, Atchinson discloses a voltage/current control device [Figures 8-9: (95)] at each of the plurality of parallel connected sub-arrays of LEDs.

23. Claims 26, 28-30, 32-33, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Duarte (U.S. Patent 5559681).

24. With regards to Claim 26, Duarte discloses a perimeter light for mounting to a body having straight and curved surfaces including:

- A plurality of straight and bent elongated perimeter light [Figure 6], each of which includes:
 - = An array of light sources [Figure 3: (14)] that are illuminated by an electric power [Figure 2: (18, 24)];
 - = An elongated transparent tube [Figure 3: (30, 42, 44, 46)], whereby the array of light sources are disposed within the tube, said tube transmits

- and disperses the light from the array giving the appearance that the array of light sources is a continuous light source [Figure 3: (41)];
- = Said array of light sources being cuttable at intervals to shorten the array while allowing the remaining light sources in the array to emit light, whereby the tube is cuttable to match the length of the array [Figure 1];
 - = Said plurality of perimeter lights electrically coupled in a daisy-chain with the electrical power at each of the plurality of perimeter lights transmitted to the successive of the plurality of perimeter lights [Figure 4; Column 4, Line 66 – Column 5, Line 5]; and
 - = An anchoring system [Figure 3: (32-34)] for mounting each of the straight and curved perimeter lights to a structure, each of the plurality of straight perimeter lights anchored to the straight portion of the body and each of the plurality of bent perimeter lights being anchored to a curved portion of the body [Figure 6; Column 1, Lines 5-21].

25. With regards to Claim 28, Duarte discloses each of the array of light sources including an-array of light emitting diodes (LEDs) mounted on a substrate [Column 2, Lines 12-13].

26. With regards to Claim 29, Duarte discloses each of the array of LEDs being arranged as a plurality of parallel connected sub-arrays of LEDs, said electric power coupled across each of the plurality of sub-arrays [Figure 7].

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27. With regards to Claim 30, Duarte discloses the array of LEDs [Figure 7] being cuttable between two of the plurality of parallel sub-arrays [Figure 1; Column 1, Lines 57-63].

28. With regards to Claim 32, Duarte discloses the array of LEDs being cuttable between two of the serially connected plurality of PCBs to shorten the LED array [Figure 1].

29. With regards to Claim 33, Duarte discloses the electrical power at each of the plurality of perimeter lights being transmitted to the successive of the plurality of perimeter lights by an electrical conductor, wherein the cutting of the LED array in each perimeter light does not interrupt the transmission of the electrical power between successive said plurality of perimeter lights [Figure 4].

30. With regards to Claim 36, Duarte discloses a voltage/current control device [Figure 7: (110, 112)] at each of the plurality of parallel connected sub-arrays.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31. Claims 15 and 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson et al. (U.S. Patent 6371637) as applied to Claim 14 and 12, respectively above, and further in view of Alexanderson et al. (U.S. Patent 6871981).

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32. With regards to Claim 15, Atchinson discloses the claimed invention as cited above, but does not specifically teach a plurality of printed circuit boards, wherein each of the plurality of parallel connected LED sub-arrays is mounted to a respective one of the PCBs, whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs.

Alexanderson teaches a plurality of printed circuit boards [Figures 4, 6: (400)], wherein each of a plurality of parallel connected LED sub-arrays [Figures 4, 6: (402)] is mounted to a respective one of the PCBs [Figure 10], whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs [Column 6, Lines 23-24].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Atchinson to incorporate the plurality of circuit boards, with LED sub-arrays mounted thereon, in serial connection with one another, as taught by Alexanderson, in order to provide a simple, attachable/detachable lighting unit that may increase/decrease overall illumination according to a user's preference.

33. With regards to Claim 18, Atchinson in view of Alexanderson discloses the claimed invention as cited above. In addition, Atchinson teaches the array of LEDs capable of being cut between two of the connected plurality of PCBs to shorten the LED array [Column 9, Lines 9-20].

34. With regards to Claim 20, Atchinson discloses the claimed invention as cited above, but does not specifically teach an anchoring slot integral with the perimeter light

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and a plurality of mounting buttons, whereby the mounting buttons are mounted to a structure and cooperating with the slot to hold the perimeter light on the structure.

Alexanderson teaches an anchoring slot integral [Figure 5: (504)] with the perimeter light and a plurality of mounting buttons [Figure 5: note the screw; Column 6, Lines 63-65 for a plurality], whereby the mounting buttons are mounted to a structure and cooperate with the slot to hold the perimeter light on the structure.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Atchinson to incorporate the mounting bracket of Alexanderson in order to provide a more secure and permanent support for the device on a structure.

35. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson et al. (U.S. Patent 6371637).

Atchinson discloses the claimed invention as cited above. In addition, Atchinson teaches bumpers/end caps [Column 10, Lines 22-29] mounted at the ends of the tube to protect the LED array, but does not specifically teach the bumpers/end caps being compressible to compensate for the expansion and contraction of the tube and LED array.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the bumpers/end caps out of an elastic material, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, it is considered obvious that one would want to ensure safety

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of the inside components regardless of expansion or contraction of the tube due to environmental conditions, and thus, use an elastic material for the bumpers/end caps.

36. Claims 27, 31, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duarte (U.S. Patent 5559681) as applied to Claim 26 above, and further in view of Alexanderson et al. (U.S. Patent 6871981).

37. With regards to Claim 27, Duarte discloses the claimed invention as cited above, but does not specifically teach the anchoring system including a longitudinal anchoring track running along the tube and a plurality of anchoring buttons mounted to the structure, whereby the anchoring track of each of the perimeter lights is capable of mating to the anchoring buttons.

Alexanderson teaches an anchoring track [Figure 5: (504)] on the side of the perimeter light and a plurality of anchoring buttons [Figure 5: note the screw; Column 6, Lines 63-65 for a plurality], whereby the anchoring buttons are mounted to a structure and mate with the track to hold the perimeter light on the structure.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Duarte to incorporate the mounting bracket of Alexanderson in order to provide a more secure and permanent support for the device on a structure.

38. With regards to Claim 31, Duarte discloses the claimed invention as cited above, but does not specifically teach a plurality of printed circuit boards, wherein each of the plurality of parallel connected LED sub-arrays is mounted to a respective one of the

PCBs, whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs.

Alexanderson teaches a plurality of printed circuit boards [Figures 4, 6: (400)], wherein each of a plurality of parallel connected LED sub-arrays [Figures 4, 6: (402)] is mounted to a respective one of the PCBs [Figure 10], whereby each of the PCBs is electrically connected in series such that an electrical signal applied to the series is transmitted to the PCBs [Column 6, Lines 23-24].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Duarte to incorporate the plurality of circuit boards, with LED sub-arrays mounted thereon, in serial connection with one another, as taught by Alexanderson, in order to provide a simple, attachable/detachable lighting unit that may increase/decrease overall illumination in an area according to a user's preference.

39. With regards to Claim 35, Duarte discloses the claimed invention as cited above, but does not specifically teach the array of light sources being mounted to a flexible circuit board material.

Alexanderson teaches mounting an array of light sources [Figures 4, 6: (402)] to a flexible circuit board material [Figures 4, 6: (400); Column 4, Line 24].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the elongated perimeter light of Duarte to mount the array of light sources to a flexible circuit board, as taught by Alexanderson, in order to provide

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support and simplify manufacturing by disposing the electrical components of the device onto said flexible circuit board.

40. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duarte (U.S. Patent 5559681).

Duarte discloses the claimed invention as cited above. In addition, Duarte teaches bumpers/end caps [Figure 2: (22)] mounted at the ends of the tube to protect the LED array, but does not specifically teach the bumpers/end caps being compressible to compensate for the expansion and contraction of the tube and LED array.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the bumpers/end caps out of an elastic material, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, it is considered obvious that one would want to ensure safety of the inside components regardless of expansion or contraction of the tube due to environmental conditions, and thus, use an elastic material for the bumpers/end caps.

Allowable Subject Matter

41. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

42. The following is a statement of reasons for the indication of allowable subject matter: With regards to Dependent Claim 16, the Applicant has sufficiently claimed and

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recited the tube further including a track, whereby each of the PCBs contains a washer to ride on the track to mount the PCBs within the tube. The prior art of record fails to teach or suggest the combination of structural elements claimed herein, specifically each PCB having a washer to ride on a track so as to mount said PCBs within a tube.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M Han
Examiner
Art Unit 2875

JMH (4/12/2006)


ADAM CARIASO
PRIMARY EXAMINER